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ABSTRACT

This third party evaluation report of the Alpine Career Orientation Project presents the results of tests designed to measure seventh, eighth, and ninth grade student learning outcomes and the results of an analysis of a random sampling of portfolios kept by students during the course of the project. The portfolios consisted of student records of career-oriented projects such as career interviews with parents and counselors and other career-related activities. Since project objectives relating to the portfolios primarily specified quantity, most validation data were gathered and reported by frequency count, although a quality check was made whenever possible. The second portion of the report summarizes test and questionnaire data from three experimental and two control student groups. The instruments and evaluation procedures are described and the results are presented in narrative and tabular form. (NJ)

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A SECOND EVALUATION OF THE ALPINE CAREER ORIENTATION PROJECT FINAL REPORT

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September 1974

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TABLE OF CONTENTS

I. Evaluation

A. Checklist "A" - Student/Parent/Counselor Conference

II. Checklist "B" - Goal Statements

A. Summary - Checklist "B"

III. Checklist "C" - Portfolios

A. Seventh Grade
B. Eighth Grade
C. Ninth Grade

IV. Second Evaluation, prepared by Norman B. Murray

V. Appendix

A. Checklist "A" - 7th Grade
B. Checklist "A" - 8th and 9th Grades
C. Goal Statements on Career Objectives, Checklist "B"
D. Checklist "C" - Portfolios

Evaluation

ALPINE CAREER ORIENTATION PROJECT

The Career Orientation Project specified eight objectives students in grades 7, 8 and 9 were to accomplish. Some of the objectives called for academic achievement. Some specified career oriented projects. These activities and perceived results were to be described by the student and kept in a portfolio.

Academic achievement was measured by pre and post or post and control group tests. Test items were designed to assess learning outcomes specified by the curriculum of the project. These results are reported in the attached evaluation document prepared by Norman Murray of the Instructional Development Program (IDP) at B.Y.U. This document also presents questionnaire results designed to corrorborate student performance as evidenced by his portfolio summaries.

The other portion of the report considers the result of physically checking a random sampling of all of the portfolios kept by students. Since project objectives relating to the portfolios primarily specified quantity, most validation data was gathered with a frequency count. Every opportunity to include quality check was pursued and the check list shows that some data of this type was gathered. For example, when students were to write career objectives, the evaluators felt they could be judged as being complete, i.e., well-stated; partially complete, i.e., written but not well-stated; or not written at all. Goal statements also seemed to lend themselves

to an assessment of quality and frequency.

Goal quality was evaluated as 1) being written with a functionally usable amount of specificity, or 2) written, but so broadly stated they were not too functional but gave evidence of limited understanding of how to write goal statements. They were also judged as to whether or not they were short range and achievable during the year.

Portfolios were collected at each building by district personnel. The evaluators then drew a sample which consisted of between 10% and 20% of all portfolios submitted.

The following pages report the results of the analysis of the portfolios and the results gathered in connection with the academic achievement of students participating in the Alpine School District Career Orientation Project, 1973 - 74.

I. STUDENT/PARENT/COUNSELOR CONFERENCE

Seventh Grade

From the random selection of portfolios for 7th graders at Lehi Jr. High, Orem Jr. High, Lincoln Jr. High and Pleasant Grove Jr. High in the Alpine School District, the following responses were reported: (Checklist A in the Appendix shows the format of the data in the portfolio).

Item #1 - Subjects Discussed:

	Percent Response			
	considerable	some	mentioned	no response
a. School, 1st-full time job	45	25	5	25
b. School Achievement	62.5	35	2.5	0
c. Abilities	27.5	47.5	25	0
d. Interests	42.5	50	7.5	0
e. Home Responsibilities	15	57.5	20	7.5
f. Career Goals	82.5	15	2.5	0

From this summary, it appears that counselors at the above mentioned schools did make an attempt to include career goals in the conference sessions, since 82-1/2% spent considerable time on them and another 15% devoted some time exploring goals.

School achievement was also a topic receiving considerable attention for approximately two-thirds of those sampled.

All but two of the six items were at least mentioned during the counseling experience. Twenty-five percent did not mention category (a), "School, 1st-full-time job" while "Home Responsibilities"

were not a matter of discussion in 7-1/2% of the interviews. Only American Fork Jr. High did not include a report of these conferences.

Item #2 - Students' Participation in the Discussion:

All records indicated involvement of the student during the conference session. In fact, 37-1/2% were much involved, while 55% indicated some participation and only 7-1/2% suggested they interacted a little bit. None of the reports suggested that students just listened. They participated to some extent in all conferences included in the sample.

Item #3 - Parents Present:

A fairly substantial amount of parental interest in the counseling sessions is suggested by the fact that 70% of those included in the sample had their mothers present and 7-1/2% were able to be interviewed in the presence of both parents. Thus, only one student out of every eight in the seventh grade was not able to have either parent in attendance when going over the career program.

Item #4 - Students adjusting to Junior High:

The students, parents and counselors included in this survey rated student adjustment as follows:

Well adjusted	87-1/2%
Indifferent	8-1/2%
Social Problems	2-1/2%
No Response	2-1/2%

It would therefore appear that seventh graders in Alpine School District, as a group, are experiencing relatively few serious problems in the transition from elementary to junior high.

Item #5 - Students' Response to the Conference:

Only one student was reported as being shy during the conference period. Five percent indicated an indifferent attitude to the experience, but the balance (92-1/2%) were either: a) interested in, or b) enthusiastic about the opportunity available in these sessions to explore the topics considered.

Item #6 - Students' Reaction to Career Education in Class:

Not as many students indicated a) an interest, or b) an enthusiastic attitude toward the career class as they did toward the individual conferences reported in Item #5. However, a clear majority (75%) reacted positively in these two combined categories.

There were 20% of the students who reacted indifferently to the class while only 2-1/2% did not respond to this item on the survey sheet.

Item #7 - Career Goals:

Of the personal goals written by students, 47-1/2% were judged to be specific and meaningful; 17-1/2% were general and long range; 12-1/2% of the statements appeared to lack purpose or direction.

In this category (Career Goals), 10% of the students did not write any statements and another 12-1/2% were of such a nature that it was felt they should be revised with parental guidance.

Item #8 - Parent Involvement in Career Goal Setting:

For those parents who were assisting their children in establishing realistic goals, 37-1/2% were viewed as being

constructive participants and 45% were supportive of the students' efforts along this line.

One parent expressed concern about being involved and 15% of the reports contained no response about how or whether parents were involved.

Item #9 - Parent Responses to Career Programs in the Junior High:

None of the parents were a) indifferent to the Career Education Program and none felt b) other academic subjects would be preferable.

Fifteen percent of the forms had no response on this item. An equal number (15%) of parents favored the experience in career orientation enthusiastically. The majority of the parents (70%) reacted to this program with interest.

Item #10 - Parents Verbal or Observable Reaction to Student/Parent/Counselor Conference:

Of the parents who participated in the conference, 35% seemed to feel it was very worthwhile and an additional 50% of those in attendance expressed the feeling that they were glad to come. The remaining 15% of the forms had no response in this category. None of the parents appeared indifferent to the opportunity of meeting with their child and the counselor and none suggested the interaction was a waste of time.

Item #11 - Other:

Only three additional comments were entered on the forms included in the sample. They were:

a. Seventh grade is too early for a career class.
b. One student viewed as very immature--not willing to make decisions.
c. One student still in fantasy stage--unwilling to consider the real world of work.

STUDENT/PARENT/COUNSELOR CONFERENCE

Eighth Grade

The counselors at Pleasant Grove Junior High held Small Group Interviews for eighth graders, rather than individual conferences.

During the course of the year, conferences were held with 252 students which represented 92% of those enrolled. Of these, 150 or 60% had parents present.

It was reported that the small group sessions included discussions on each of the six topics listed on the summary form. That is, each student had an opportunity to interact with a counselor and parents (when present) regarding the following:

a. School, 1st full-time job
b. School achievement
c. Abilities
d. Interests
e. Home Responsibilities
f. Career goals

II. CHECKLIST "B" - GOAL STATEMENTS

Each student in the Career Education Project was to have written at least three Personal Goal Statements relating to their own desires concerning involvement with Career oriented activities. The observations from each portfolio were transferred to Checklist B (see Appendix for copy).

The analysis of the goal statements for each grade appears on the following page. It will be noted that over 80% of the students in each grade did have goal statements included in their portfolios.

While the instructions called for three statements per student, the data indicates that two seventh graders had written four goals and one student in this category had five.

A glance at the chart also shows that the great majority of the goals were specific and deemed to be achievable during the school year. For example, thirty of the thirty-six seventh grade lists fell in this group (specific) while only six had written goals that were viewed as general in nature.

It appears that counselors at Lincoln Jr. High were not as insistent on the writing of these goals as were the other schools.

SUMMARY OF ALPINE SCHOOL DISTRICT CAREER EDUCATION PROJECT

Checklist "B"

	Grade 7	Grade 8	Grade 9
# of respondents in sample	36	35	22
# of Career Guides on file	32*(89%)	32** (91%)	18*** (82%)
# of Goal Statements in Portfolio	0 1 2 3 4 5	0 1 2 3 4	0 1 2 3 4
# of students responding	0 2 7 20 2 1	4 6 5 14 3	2 0 6 9 1
# of Goal Statements which are --			
Specific			
# of goal statements	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
# of students responding	0 4 4 21 1	0 7 6 13 1	0 0 6 9 1
General			
# of goal statements	0 1 2 3	0 1 2 3	0 1 2 3
# of students responding	0 2 4 0	0 1 2 1	0 0 0 0
Achievable during year			
# of goal statements	0 1 2 3 4	0 1 2 3	0 1 2 3 4
# of students responding	0 4 6 21 1	2 9 5 2	0 0 6 9 1

* CG's missing from following school: Lincoln (4)

** CG's missing from following schools: Lincoln (2), Orem Jr. (1)

*** CG's missing from following schools: Lincoln (3), American Fork (1)

III. Checklist "C" - Portfolios

Seventh Grade

Of the thirty-five seventh graders whose portfolios were randomly selected to determine the extent to which career oriented materials were contained therein, the following summary presents the results: (see a copy of Checklist "C" in the appendix).

Item #1: Career Development Guide

Thirty-one (88.6%) of the portfolios contained a Career Development Guide as part of the material. Only four (11.4%) did not include this particular form. All four of these were from Lincoln Junior High. Thus, the remaining jr. high schools (American Fork, Pleasant Grove, Lehi and Orem) had 100% participation (according to the sample) in this category.

Item #2: Career Exploration Worksheet

"Career Exploration Worksheets" or "Outlines for Studying an Occupation" were included for most of the students from Pleasant Grove Jr. High, American Fork Jr. High, and some from Orem Jr. High. In all, nine such worksheets were complete and five were partially complete.

There were no reports, in this category, for students from Lehi Jr. High or Lincoln.

Item #3: Field Trip Form

Field trips, relating to career opportunities, were apparently handled differently by each school. Eleven portfolios contained the "Field Trip Form" with a total of 34 separate trips being reported. In addition, the students from Lehi Jr. High wrote papers concerning visits to various career related sites. Some had as high as 16 different career areas included in the paper.

Students from American Fork Jr. High and Orem Jr. High did not have a special form or format for reporting such visits or experiences, but several students had reference to contracts outside the school which were in connection with gaining additional information about specific vocations.

Item #4: Career Related Homework

Eighty-six percent of the students from the junior high schools surveyed included career related homework papers in their portfolios. Some were brief paragraphs and others extended to several very detailed pages. In all, 115 separate experiences

were reported in this category, which was approximately 4 per student sampled.

Item #5: Job Families Interest Sheet

When asked to indicate their interest regarding certain "Job Families," the seventh graders who so responded did so in the following manner:

Job Families Interest
N = 20

	Total	Ave.
Number of Job Families interested in	109	5.45
Number of Job Families not interested in	137	6.85
Number of Job Families - "Don't Know"	60	3.00

Apparently, students had done considerable research concerning, or had been exposed to, the various families for potential work opportunities. However, there was an indication that more thorough exposure would be needed to the various job groupings before more realistic decisions could be made, since there were an average of three job families per student where a lack of knowledge was evident. That is, if the entire population of the seventh grade were unacquainted with an average of 20% of the job possibilities, it would seem that greater emphasis upon this area is necessary before they can realistically be expected to express their preferences.

In this category, seven students, all from Lehi Jr. High, had prepared "kits" concerning the various job families. Their results were not reported on the form used by the other schools, but the materials presented were evidence that a considerable amount of time had been spent with the students in an effort to assist them in analyzing the similarities and differences of requirements and rewards associated with the various job families.

Item #6: Self-Analysis Sheet

Twenty-five of the thirty-five seventh graders had filled out a Self-Analysis Sheet. Of these, 18 were complete and 7 were only partially complete. The information called for on this exercise was designed to assist the respondent take a more thorough look at himself and his potential regarding certain anticipated goals. The responses indicate a fair degree of introspection on the part of this age group. While there were forms for some students from each junior high school, those from Lehi and American Fork were much more complete than the others.

Summary for Seventh Graders:

While the portfolios provided limited information regarding a student's involvement in Career Oriented Activities, it is the opinion of the evaluators that they did not adequately represent

what had actually taken place in the respective schools.

It appears that there was a lack of consistency regarding what was to be included in the portfolio.

Not all students in the same school had the same information included.

One gains the impression from glancing through the portfolios that many very excellent experiences were engaged in by the students that would assist them in clarifying their understanding of various job requirements, but the format of the portfolio didn't seem to provide adequate opportunity for these to be included in a systematic manner.

Eighth Grade

From the thirty-five eighth grade portfolios randomly selected for analysis, the following information provides a summary regarding their involvement in the Career Education Project:

Item #1: Career Development Guide

Thirty-two or 91% of the portfolios for eighth graders included a Career Development Guide. Only three of the students sampled did not have this sheet as part of their file.

There was 100% inclusion of the Career Development Guide for students from American Fork Jr. High, Orem Jr. High, and Pleasant Grove Jr. High.

Item #2: Career Exploration Worksheet

Career Exploration Worksheets were part of the portfolios for all junior highs except Plesant Grove, and 100% of the students in the other junior highs had included them (as indicated by the sample chosen for this study).

Item #3: Field Trip Form

Two schools, American Fork Jr. High and Pleasant Grove Jr. High, seemed to emphasize the use of the field trip form. The nine students in the sample who had this form in their portfolio were from these schools (four from American Fork and five from Pleasant Grove). Of the nine, all were complete and one student from Plesant Grove had filled out three separate forms each reporting on a different career related field trip.

Item #4: Career Related Homework

While students from American Fork Jr. High and Pleasant Grove Jr. High reported on field trips in item #3 above, and the other schools had not apparently used that form, the next category disclosed considerable homework related to the study of careers at Orem Jr. High, Lincoln Jr. High and Lehi Jr. High. In fact, the schools in Orem reported 19 specific homework papers for fourteen students and the seven portfolios from Lehi contained a total of seventeen homework assignments emphasizing in-depth study of selected careers.

It appears that American Fork and Pleasant Grove utilized the Field Trip Form to report their experiences and the students from the other schools wrote up their visits as homework papers.

Item #5: Job Families Interest Sheet

The project called for a reaction to the Job Families Interest Sheet from seventh graders only. However, the eighth graders from American Fork Jr. High also completed it. The sample from that school averaged six areas in which they expressed an interest; six where there was no interest and three "job families" that they didn't know enough about to make a choice. This "Don't Know" category was the same as the sample from the seventh grade, in terms of the average number of areas where students were not adequately informed.

Item #6: Self-Analysis Sheet

One school (Lehi Jr. High) also had eighth graders respond to the Self-Analysis Sheet which to be required only of seventh graders. 100% of the students in the sample from Lehi completed this form and none left it blank.

Summary for Eighth Graders:

The format of reporting activities and experience of eighth graders did not seem as clear as that for seventh graders. Each school seemed to identify the area of emphasis they desired and then developed their own system of reporting the involvement. At least, the forms supplied in the career education materials were not consistently used by eighth graders in the development of their portfolios.

Again, from the meager evidence supplied by the eighth graders, one would be led to question the degree of exposure to Career Education engaged in by this age group. However, there is sufficient information in several of the portfolios to suggest that quite a variety of experiences were available to the students -- the data just didn't seem to find its way into a majority of the files.

Ninth Grade

Ninth grade portfolios were available only for students from Orem Jr. High, Lincoln Jr. High and American Fork Jr. High. The sample taken from these three schools revealed the following:

Item #1: Career Development Guide

All students from Orem Jr. High and American Fork Jr. High had completed a 'Career Development Guide'as as had one-third of those from Lincoln. The ninth grades from Pleasant Grove and Lehi were apparently not utilizing this particular guide.

Item #2: Career Exploration Worksheet

The Career Exploration Worksheet was in 100% of the portfolios from Orem Jr. High and American Fork Jr. High. All were complete with no blank ones submitted.

Half the ninth graders from Lincoln Jr. High had included this worksheet and were judged to have it completed. The remaining half of the portfolios from this school did not have any copies of this form (blank or partially complete).

Item #3: Field Trip Form

Only three ninth graders, one from Orem Jr. High and two from American Fork Jr. High had responded on the Field Trip Form. In all three cases the form was complete. This would indicate that the form was accessible but was apparently not stressed as being a required part of the portfolio.

Item #4: Career Related Homework

41% of the ninth graders sampled had career related homework papers written up. There were none from American Fork Jr. High, but those reporting from the two junior highs in Orem included a total of 35 different experiences, or an average of just over two per student.

Items 5 and 6: Job Families Interest Sheet
and Self-Analysis Sheet

There were for the 7th graders only, and appropriately no ninth graders had included information on either form.

Item #7: "On-the-job" Experience Sheet

This item was exlusively for ninth graders and called for an "on-the-job" or "Hands-on" experience sheet relating

to a specific exposure to a chosen career.

Just 50% of the portfolios of 9th graders included in the sample had the required sheets for this category completed and included as part of their career portfolio. There were some from each of the three junior highs which had 9th grade information available (Orem, Lincoln, American Fork Jr. Highs), but none had 100% of the students responding on these sheets.

Summary for Ninth Grade:

Pleasant Grove Jr. High and Lehi Jr. High did not submit any information concerning portfolio activity for their ninth graders. It is doubtful that this absence is indicative of the nature of the Career Education Program in those schools.

The other three schools (American Fork Jr. High, Lincoln Jr. High and Orem Jr. High) had minimal information available for this age group, but it was evidenced that some type of Career Information was available.

A SECOND EVALUATION OF THE ALPINE CAREER ORIENTATION PROJECT FINAL REPORT

Prepared by

Norman B. Murray

Department of Instructional Evaluation and Testing

July 30, 1974

A SECOND EVALUATION OF THE ALPINE CAREER ORIENTATION PROJECT

This report summarizes test and questionnaire data obtained from 7th, 8th, and 9th grade students in the Alpine School District Career Orientation Program. Comparisions of test results for 8th and 9th grade students are made with results for students of identical grade levels in the Provo School District. The study was conducted during the first four months of 1974.

SUBJECTS

Five groups of secondary students were involved in this study. One or more classrooms of students from various schools comprised each group. Three groups came from the Alpine School District and will be called the "7th grade experimental," "8th grade experimental" and "9th grade experimental" groups for purposes of this report. They represented the 7th, 8th and 9th grade levels, respectively. The remaining two groups, an 8th grade group and a 9th grade group, came from the Provo School District and will be called the "8th grade control" and "9th grade control" groups. The two groups from Provo School District were compared with the groups from the Alpine School District to evaluate the effects of the Career Orientation Program.

INSTRUMENTS

Three instruments were used in this study.

One instrument was a "questionnaire" containing twenty questions. The first eight questions concerned demographic and miscellaneous information about the students' participation in the Career Orientation Program. The next six questions probed details about the student portfolio described below. The last six questions concerned employment or career experience.

Two cluster scores were computed from the questionnaire data. The first cluster score called "portfolio" measured the number of portfolio-related activities completed by the student. The second, called "experience," measured the number of career-related experiences each student had within the duration of the Career Orientation Program.

Another instrument, called "7th grade test," was identical to the one used in an earlier study conducted within the last year in the Alpine School District regarding Career Education. This instrument was intended for use with 7th grade students. Thirteen cluster scores were computed from thirteen corresponding sets of items on this instrument concerning mainly cognitive content of the Career Orientation Program for 7th grade students. For example, one cluster score (I) consists of the number of different pieces of audio-visual equipment which the student is able to use. This score is used as a measure of his ability to operate audio-visual equipment. General descriptions for other cluster scores are indicated in Table 1.

The third and remaining instrument, called the "8th and 9th grade test," covered cognitive content for 8th and 9th grade students. Eight cluster scores corresponding to eight sets of items on this test were computed in a similar manner to cluster scores on the "7th grade test." (See Table 2).

TABLE 1

LABELS OF CLUSTERS FOR "7TH GRADE TEST"

Cluster I	- Types of audio-visual equipment the students have learned to operate - 10 items.
Cluster II	- Types of vocations for which personal appearance is an important factor - six items.
Cluster III	- Classification of examples of how people react to different situations - five items.
Cluster IV	- Classifying examples of values - four items.
Cluster V	- Factors influencing career decisions - six items.
Cluster VI	- Classifying examples of "job families" - five items.
Cluster VII	- People influencing goals - six items.
Cluster VIII	- Places where career education information can be found - five items.
Cluster IX	- Factors involved in values - seven items.
Cluster X	- Information included in an occupational information kit - five items.
Cluster XI	- Ways of planning for studying - four items.
Cluster XII	- Educational requirements for occupations - seven items.
Cluster XIII	- Seventeen items asking for specific information about knowledge and experiences in which a career-orientation course should result. This cluster "defines" career-orientation to a great extent.

TABLE 2

LABELS FOR CLUSTERS ON "8TH AND 9TH GRADE TEST"

Cluster 1.	Identification of major job characteristics
Cluster 2.	Identification of job families
Cluster 3.	Educational requirements for veterinarian and for policeman
Cluster 4.	Items for inclusion in letter of application
Cluster 5.	Educational Training requirements for various jobs
Cluster 6.	Analysis of interest, ability, and values in choice of work
Cluster 7.	Miscellaneous questions about Careers
Cluster 8.	Self-report measure of performance of various tasks related to careers

PROCEDURES

Materials and activities for the Career Orientation Program were designed by 50 Alpine teachers in a workshop setting. The teachers prepared materials necessary for implementing the activities in the 7th, 8th and 9th grades in Alpine District.

The Career Orientation Program for 7th grade students called for daily classroom attendance in a semester-long Career Orientation Course. A Student Portfolio and Career Orientation Interview were the main features of the course. The portfolio provided a place where students filed written materials related to careers for later reference including (1) descriptions of career field trips, (2) research papers, (3) a job family rating sheet, (4) a paper on self-analysis and (5) a Career Development Guide Form.

The Career Orientation Interview brought students together with their teachers and parents to discuss student career goals. The interviews were conducted for most students. Some interviews were held with individual students separately while others were held with groups of students. Parents of some students attended the interviews.

The 8th and 9th grade students attended a two-week mini-course for one hour each school day. Content for the mini-course was similar to the content for the 7th grade students. In addition to the mini-course, 9th grade students were required to have some job-related experience such as working part-time or visiting a potential place of employment on their own.

Seventh grade students underwent a different testing procedure than did 8th grade or 9th grade students. The "7th grade test" was administered as a "pretest" before these students received any instruction in the Career Education Program. Then, the students were allowed to go through the program after which the "7th grade test" was administered as a "posttest." The "questionnaire" was also administered to the seventh grade students after they had completed the program. Therefore, "pretest," "posttest" and "questionnaire" data were collected for the "7th grade experimental" group.

Whereas, a pretest/posttest design was employed for 7th grade students, a posttest/control-group design was used with 8th grade students. The "8th grade experimental" group received instruction in the Career Education Program, while the "8th grade control" group received regular classroom instruction in the adjoining Provo School District. The "8th and 9th grade test" was administered to both groups following instruction. The "questionnaire" was administered to the "8th grade experimental" group but not to the "8th grade control" group. Therefore, treatment-control comparisons are possible using test data but not questionnaire data.

Measurements for 9th grade students were identical to those for 8th grade students. Therefore, treatment-control comparisons are possible for 9th grade students in terms of the "8th and 9th grade test" but not in the "questionnaire." Nevertheless, "questionnaire" data can be compared among the three grade levels, 7th, 8th and 9th grades.

RESULTS

Seventh Grade Students

All thirteen cluster scores were numerically greater on the 7th grade "posttest" than they were on the "pretest." Most pre-post differences in mean cluster scores were statistically significant at the 0.05 level of significance. The more noticeable differences occurred for clusters regarding use of audio-visual equipment (I), examples of how people react to different situations (III), clarifying examples of "job families" (VI), sources of career information (VIII) and factors involved in values (IX). The more noticeable differences were statistically significant beyond the 0.001 level. These data are summarized in Table 3.

TABLE 3

PRE-POST COMPARISON FOR 7TH GRADE STUDENTS

Cluster	Pretest (N=125)		Post-test (N=112)	Maximum Score
I	5.880	$<$	7.321	10.000
II	4.016	$<$	4.580	6.000
III	2.912	$<$	3.777	5.000
IV	1.312	N.S	1.375	4.000
V	2.688	N.S.	2.857	6.000
VI	3.232	$<$	4.214	5.000
VII	2.776	N.S	3.045	6.000
VIII	3.448	$<$	3.973	5.000
IX	4.640	$<$	5.366	7.000
X	3.024	N.S.	3.286	5.000
XI	2.536	$<$	2.768	4.000
XII	2.832	$<$	3.321	7.000
XIII	8.440	$<$	9.482	23.000

$<$ Significant at 0.001 level

$<$ Significant at 0.05 level

N.S. Non-significant at 0.05 level

Seventh grade cluster scores were broken down by sex yielding mean scores for boys (N=60) and girls (N=52). These data are presented in Table 4. The boys scored significantly higher than the girls on the posttest cluster score relating to the use of audio-visual equipment (I), one area where a more noticeable pre-post difference occurred for 7th grade students at large. The girls scored significantly higher than the boys on the posttest cluster scores relating to "career orientation" (XIII) and ways of planning for study (XI). These results are summarized in Table 4.

TABLE 4

POSTTEST CLUSTER SCORES FOR 7TH GRADE

Cluster	Boys (N=60)		Girls (N=52)
I	7.717	*	6.865
II	4.683	N.S.	4.462
III	3.733	N.S.	3.827
IV	1.367	N.S.	1.385
V	2.683	N.S.	3.058
VI	4.050	N.S.	4.404
VII	2.967	N.S.	3.135
VIII	3.983	N.S.	3.962
IX	5.250	N.S.	5.500
X	3.200	N.S.	3.385
XI	2.600	*	2.962
XII	3.283	N.S.	3.365
XIII	8.633	*	10.462

* Significant at 0.05 level

N.S. Non-significant at 0.05 level

Eight and Ninth Grade Students

The mean cluster scores for the "8th grade experimental" group on the "8th and 9th grade test" were all greater than the corresponding scores for the "8th grade control" group. Two of these comparisons were significant at the 0.05 level. These were the clusters dealing with identification of job families (2) and with a self-report measure of performance of various tasks related to careers (8). The remaining six comparisons for the 8th grade students were non-significant at the 0.05 level.

Results for 9th grade students differed from results for 8th grade students in two respects. First, not all mean cluster scores for the "9th grade experimental" group were greater than the corresponding mean scores of the "9th grade control" group, although none of these reversed differences were statistically significant at the 0.05 level. Second, no cluster score on the "8th and 9th grade test" was significantly different for both 8th and 9th grades. This may indicate that the Career Orientation Program is not sufficiently effective to produce consistent results provided that areas represented by the cluster scores receive equal emphasis at both the 8th and 9th grade levels.

TABLE 5

MEAN CLUSTER SCORES FOR STUDENTS IN GRADES 8 AND 9

Cluster	8th Grade (N=119)		8th Grade Control (N=40)	9th Grade (N=110)		9th Grade Control (N-50)	Maximum Score
1	7.462	N.S.	7.000	7.991	⊳	7.320	12.000
2	6.639	⊳	5.878	6.800	N.S.	6.240	10.000
3	9.101	N.S.	9.082	9.464	N.S.	9.500	13.000
4	5.471	N.S.	5.327	5.818	⊳	5.360	7.000
5	6.529	N.S.	5.837	6.909	N.S.	6.680	12.000
6	3.328	N.S.	3.184	3.391	N.S.	3.460	5.000
7	5.429	N.S.	5.286	5.709	N.S.	5.900	9.000
8	5.697	⊳	4.286	5.336	N.S.	4.580	10.000

⊳ Significant at 0.05 level

N.S. Non-significant at 0.05 level

Questionnaire Data

Responses from the first question on the questionnaire, regarding grade in school, were used to segregate students according to grade level. The means for two cluster scores, "portfolio" and "experience," were computed for each grade level. A one-way ANOVAR was performed comparing the three means for each of the two scores. Similarly, mean scores for "portfolio" and for "experience" were broken down and analyzed using responses to the remaining seven of the first eight questions on the questionnaire. Significant results are summarized in Table 6. Cluster-score-item combinations not shown in the table yielded results that were not statistically significant at the p=0.10 level.

TABLE 6

"PORTFOLIO" AND "EXPERIENCE" CLUSTER SCORES BROKEN DOWN BY SELECTED CATEGORIES
(Max. Score = 6.000)

Groups	Mean Scores	N	Probability *
1. "Portfolio", by Grade Level (Item 101)			
7th Grade	3.754	114	0.0005
8th Grade	3.008	119	
9th Grade	1.945	110	
2. "Portfolio", by Interview Mode (Item 103)			
Individual	3.315	143	0.005
Group	2.615	128	
None	2.766	64	
3. "Portfolio", by Parent Present (Item 104)			
Present	3.206	160	0.008
Absent	2.702	161	
4. "Portfolio", by Number of Goals (Item 105)			
Zero	1.782	78	0.0005
One	3.079	63	
Two	3.197	66	
Three	3.211	95	
Four or More	3.944	36	
5. "Portfolio", by Parental Help (Item 106)			
Received Help	3.099	192	0.04
Didn't receive Help	2.716	148	
6. "Portfolio", by Made Portfolio (Item 107)			
Yes	3.271	266	0.0005
No	1.712	73	
7. "Portfolio", by Learned Something (Item 108)			
Yes	3.449	181	0.0005
No	2.331	151	
8. "Experience", by Grade Level (Item 101)			
7th Grade	0.947	114	0.001
8th Grade	1.479	119	
9th Grade	1.518	110	
9. "Experience", by Parental Help (Item 106)			
Received Help	1.490	192	0.008
Didn't Receive Help	1.115	148	

* 2-tail probability for 2-mean comparisons; 1-tail otherwise.

Students were divided in terms of their reaction to the portfolio. On one hand, students in the 8th and 9th grades completed significanly fewer of the portfolio-connected activities and had significantly more vocational experience than the 7th grade students (See comparisons 1 and 3, Table 6). These facts suggest that the portfolio is probably most appropriate at the 7th grade level.

On the other hand, most students reported learning something as a result of using their own portfolio. (See comparisons 6 and 7). The number of career goals a student had was directly related to the average number of portfolio-related tasks completed, suggesting that the portfolio helps the student formulate goals or else attracts the goal-oriented student by helping him evaluate or achieve his goals (See comparison 4).

The career counselling interview provided an excellent opportunity for parents to become involved in the career education of their child. Students whose parents were present at the interview completed more of the tasks connected with the portfolio (See comparison 3).

The positive influence of parents who helped their children with career decisions was also evident. Students whose parents helped them with career decisions completed a greater number of portfolio tasks and reported having a greater number of vocational experiences (See comparisons 5 and 9).

The "individual" mode characteristic of parent-child interaction, as opposed to the "group" mode typical of most classroom instruction, encouraged greater student participation in the program. The career counselling interview conducted in the "individual" mode resulted in a significantly greater

average number of portfolio tasks completed. (See comparisons 2 and 3). Students seem to respond to the individualized approach not available in the group mode.

The apparent generalization that parental involvement improved results, while valid in many cases, needs to be qualified. Parents who became involved in career education of their children did so voluntarily on invitation from the school. Other parents were invited to participate but chose not to become involved. Some non-participating parents would contribute if they were drawn into the program while others would only make matters worse for their children if they became involved.

APPENDIX

Checklist A - 7th Grade

STUDENT-PARENT-COUNSELOR CONFERENCE

Date _____ Name _____

1. Subjects Discussed | Considerable | Some | Mentioned

   School, 1st full-time job

   School achievement

   Abilities

   Interests

   Home responsibilities

   Career goals

   Other

2. Student's participation in discussion:
   Much ___ Some ___ Little ___ None ___

3. Parents present:
   Mother ___ Father ___ Both ___ Neither ___

4. Students adjusting to Jr. High:
   Well ___ Indifferent ___ Problems: Social ___ Academic ___

5. Students response to conference:
   Enthusiastic ___ Interested ___ Indifferent ___

6. Student's reaction to career education in class:
   Enthusiastic ___ Interested ___ Indifferent ___ Negative ___

7. Career Goals
   Specific, meaningful ___, General, long range ___, Lack purpose & direction ___, Incomplete or missing ___, Needs revising with parents help ___

8. Parents' involvement in career goal setting:
   Constructive ___ Supportive ___ Passive ___

9. Parents' response to career programs in Jr. High:
   Enthusiastic ___ Interested ___ Prefer regular academic subjects ___ Indifferent ___

10. Parents verbal or observable reaction to student-parent-counselor conference:
    Very worthwhile ___ Glad to come ___ Indifferent ___
    A waste of time ___

11. Other: _____

Checklist A - 8 & 9 Grade

GROUP INTERVIEW EVALUATION

Group Conductor _____ Date _____ Time _____

Students Present	Check if present			Accomplishment of Task		
Names	Father	Mother	Guardian	Poor	Good	Excellent
1.						
2.						
3.						
4.						
5.						
6.						

Comments on things of relevance noticed about the student, family, etc.

Student #

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6. _____

_____

Evaluate by answering:

A. Did you accomplish all of the objectives according to general outline for group interview?
B. What could you do better?
C. Were there any problems?
D. General reaction of parents and students.

ALPINE SCHOOL DISTRICT CAREER EDUCATION PROJECT

Goal Statements on Career Objectives

Checklist B

Date _____

Student Name _____

Grade _____ School _____

1. Career Guide on file: Yes No

2. Number of Goal Statements in Portfolio: 0 1 2 3

3. Number of Goal Statements that are:

   a. Specific 0 1 2 3

   b. General 0 1 2 3

   c. Achievable during year 0 1 2 3

4. Comments:

Evaluator _____

Checklist C

ALPINE SCHOOL DISTRICT CAREER EDUCATION PROJECT

Portfolios

Date _____

Student Name _____ Grade ____ School _____

7th-8th-9th Grades

1. Career Development Guide included in Portfolio: Yes No

2. Career Exploration Worksheet For Studying an Occupation included: Yes No

   Worksheet (Outline) is:
   ____ Complete
   ____ Partially Complete
   ____ Blank

3. Field Trip Form included Yes No

   Form is:
   ____ Complete
   ____ Partially Complete
   ____ Blank

4. Career related homework papers included in portfolio: Yes No

   # of separate experiences reported: _____

7th Grade Only

5. Job Families Interest Sheet included: Yes No

   # of Job Families Interested in: _____
   # of Job Families Not Interested in: _____
   # of Job Families, "Don't Know": _____

6. Self-Analysis Sheet included in portfolio: Yes No

   Self-Analysis sheet is:
   ___ Complete
   ___ Partially Complete
   ___ Blank

9th Grade Only

7. "On-the-job" or "Hands-on" Experience Sheet included in portfolio: Yes No

   Experience Sheet:
   _____ Complete
   _____ Partially Complete
   _____ Blank

Evaluator: _____

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